

CLAIMS

What is claimed is:

1. A gas flow device for delivering a flow of breathable oxygen, comprising:
a body formed from a first material, the first material having a first
5 burning point in the presence of pressured pure oxygen, the body securable to a source of compressed oxygen;
an element having a pressure reducing feature and an oxygen flow path from the source of compressed oxygen to the pressure reducing element, the flow path bounded by a second material, the second material having a second
10 burning point in the presence of pressurized pure oxygen that is higher than the first burning point; and
a securing mechanism to secure the element to the body.
2. The gas flow device of Claim 1 wherein the securing mechanism includes a member that locks the element within the body.
- 15 3. The gas flow device of Claim 2 wherein the member is a fitting.
4. The gas flow device of Claim 3 wherein the fitting is a pressure gauge.
5. The gas flow device of Claim 3 wherein the fitting is a check valve.
6. The gas flow device of Claim 3 wherein the fitting is a hose connector.
7. The gas flow device of Claim 1 wherein the first material comprises aluminum
20 and the second material comprises brass.
8. The gas flow device of Claim 1 wherein the securing mechanism includes a coupling for attaching the element to an inner wall of the body.
9. The gas flow device of Claim 1 wherein the first material and the second material are metal alloys.

10. The gas flow device of Claim 1 wherein the compressed oxygen is over about 500 pounds per square inch.
11. The gas flow device of Claim 1 wherein the body is fabricated from a unitary piece of the first material.
- 5 12. The gas flow device of Claim 1 wherein the source of compressed oxygen is a supply vessel.
13. The gas flow device of Claim 12 wherein the body is securable to the supply vessel using a yoke.
14. The gas flow device of Claim 13 wherein the yoke is integral with the body.
- 10 15. A gas flow device for delivering a flow of breathable oxygen, comprising:
 - a body formed from an aluminum alloy and being securable to a pressurized supply vessel;
 - an element formed from a brass alloy and having a pressure reducing feature and an oxygen flow path from the pressured supply vessel to the pressure
 - 15 reducing feature; and
 - a securing mechanism to secure the element to the body.
16. The gas flow device of Claim 15 wherein the securing mechanism includes a member that locks the element to the body.
17. The gas flow device of Claim 16 wherein the member is a fitting.
- 20 18. The gas flow device of Claim 17 wherein the fitting is a pressure gauge.
19. The gas flow device of Claim 17 wherein the fitting is a check valve.
20. The gas flow device of Claim 17 wherein the fitting is a hose connector.

21. The gas flow device of Claim 15 wherein the securing mechanism includes a coupling for attaching the element to an inner wall of the body.
22. The gas flow device of Claim 15 wherein the securing mechanism includes mated threads.
- 5 23. The gas flow device of Claim 15 wherein the oxygen flow path can be pressurized to at least 500 pounds per square inch.
24. A gas flow device for delivering breathable oxygen, comprising:
 - a main body securable to a supply of pressurized oxygen, the main body
 - 10 fabricated from an aluminum alloy;
 - an element for receiving the pressurized oxygen at an inlet, the element fabricated from a brass alloy and having a plurality of passages, including:
 - a main passage extending between the inlet and a pressure
 - reducing feature;
 - 15 a gauge passage extending between the main passage and a gauge port; and
 - a vent passage extending between atmosphere and an area downstream of the pressure reducing feature.
25. The gas flow device of Claim 24 wherein the main body includes a yoke for
20 mounting with a supply vessel.
26. The gas flow device of Claim 25 wherein the yoke is integral with the main body.
27. The gas flow device of Claim 24 wherein the element is secured to an inner wall of the main body.
- 25 28. A method of fabricating a gas flow device for delivering a flow of breathable oxygen, comprising:

forming a body from a first material, the first material having a first burning point in the presence of pressured pure oxygen, the body being securable to a source of compressed oxygen;

5 forming an element having a pressure reducing feature and an oxygen flow path from the source of compressed oxygen to the pressure reducing element, the flow path bounded by a second material, the second material having a second burning point in the presence of pressurized pure oxygen that is higher than the first burning point; and
 securing the element to the body.

- 10 29. The method of Claim 28 wherein securing includes locking the element within the body.
30. The method of Claim 29 wherein the member is a fitting.
31. The method of Claim 30 wherein the fitting is a pressure gauge.
32. The method of Claim 30 wherein the fitting is a check valve.
- 15 33. The method of Claim 30 wherein the fitting is a hose connector.
34. The method of Claim 28 wherein the first material comprises aluminum and the second material comprises brass.
35. The method of Claim 28 wherein securing includes attaching the element to an inner wall of the body.
- 20 36. The method of Claim 28 wherein the first material and the second material are metal alloys.
37. The method of Claim 28 wherein the compressed oxygen is over about 500 pounds per square inch.

38. The method of Claim 28 wherein the body is fabricated from a unitary piece of the first material.
39. The method of Claim 28 wherein the source of compressed oxygen is a supply vessel.
- 5 40. The method of Claim 39 wherein the body is securable to the supply vessel using a yoke.
41. The method of Claim 40 wherein the yoke is integral with the body.
42. A method of fabricating a gas flow device for delivering a flow of breathable oxygen, comprising:
- 10 forming a body from an aluminum alloy and being securable to a pressurized supply vessel;
- forming an element from a brass alloy and having a pressure reducing feature and an oxygen flow path from the pressured supply vessel to the pressure reducing feature; and
- 15 securing the element to the body.
43. The method of Claim 42 wherein securing includes locking the element to the body with a member.
44. The method of Claim 43 wherein the member is a fitting.
45. The method of Claim 44 wherein the fitting is a pressure gauge.
- 20 46. The method of Claim 44 wherein the fitting is a check valve.
47. The method of Claim 44 wherein the fitting is a hose connector.
48. The method of Claim 42 wherein securing includes attaching the element to an inner wall of the body.

49. The method of Claim 42 wherein securing comprises engaging mated threads.
50. The method of Claim 42 wherein the oxygen flow path can be pressurized to at least 500 pounds per square inch.
51. A method of fabricating a gas flow device for delivering breathable oxygen,
5 comprising:
from an aluminum alloy, fabricating a main body securable to a supply of pressurized oxygen;
from a brass alloy, fabricating an element for receiving the pressurized oxygen at an inlet, the element having a plurality of formed passages, including:
10 a main passage extending between the inlet and a pressure reducing feature;
a gauge passage extending between the main passage and a gauge port; and
a vent passage extending between atmosphere and an area
15 downstream of the pressure reducing feature.
52. The method of Claim 51 wherein the main body includes a yoke for mounting with a supply vessel.
53. The method of Claim 52 wherein the yoke is integral with the main body.
54. The method of Claim 51 wherein the element is secured to an inner wall of the
20 main body.